

## PROPOSED ADDITION OF CERTAIN GENERIC AND SPECIFIC NAMES IN THE FAMILY PHASMATIDAE (CLASS INSECTA, ORDER PHASMATODEA) TO THE OFFICIAL LISTS AND INDEXES. Z.N.(S.) 1167

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Three species of Australian phasmatids are of economic importance as defoliators of eucalyptus trees. Papers on the biology of these species have been published or are in course of publication and more may be expected to be published in the future. Thus the workers concerned have an interest in the continued stability of the nomenclature of these species. A study of the literature reveals that considerable confusion exists in the nomenclature of the genera concerned and some of their near relatives. This can be resolved by a strict application of the Rules and of the decisions in regard thereto adopted by the Paris (1948) and Copenhagen (1953) Zoological Congresses. In the present paper, the International Commission is asked to endorse this application of the Rules by placing the relevant names on the Official Lists and Indexes as specified in paragraph 11 below.

Genus *Podacanthus* Gray

2. The genus *Podacanthus* Gray, 1833 (*Ent. Aust.* 1 : 17) presents no difficulty. Its type species by monotypy is *Podacanthus typhon* Gray, 1833 (*ibid.* : 17, pl. 2, fig. 1). In the British Museum (Natural History) there is a female of this species labelled "Sydney, New South Wales" and bearing the museum registration number 40.4.2.1304. The museum register contains the following entry against this number: "Phasma. New Holland. Bought at Mr. Children's sale". There is every probability, therefore, that this is the female figured by Gray, which he stated was in the collection of J. G. Children and came from Port Jackson (i.e. Sydney). I hereby select this specimen to be the lectotype and have labelled it as such. *P. wilkinsoni* Macleay (W.J.), 1881 (*Proc. linn. Soc. N.S.W.* 6 : 538)—not 1882 as commonly cited (see Musgrave, 1932, *Bibl. Aust. Ent.* : 213)—is an economic species. However, Macleay employs an erroneous subsequent spelling for the name *Podacanthus*, which he gives as *Podocanthus*. Macleay's original material is preserved in the Macleay Museum, University of Sydney. It consists of two males and a female, all of which have been dried from spirit, as stated by the author. One of the males bears the label "*Podocanthus Wilkinsoni*, MacL. Binda Caves. March 1881" in the handwriting of George Masters, Macleay's preparator. I have selected this specimen to be the lectotype and labelled it as such. The other two specimens were unlabelled but closely associated with the labelled one (one on each side of it). I have labelled them "Original material of Macleay, 1881".

Genus *Didymuria* Kirby

3. Gray (1883, *Ent. Aust.* 1 : 26) employed the generic name *Diura* for a group of Australian phasmatids. However, this name was preoccupied

by *Diura* Billberg, 1820 (*Enum. Ins. Mus. Billberg* : 96), in the Neuroptera. Kirby, 1904 (*Syn. Cat. Orthopt.* 1 : 381) proposed the name *Didymuria* as a *nom. nov.* for *Diura* Gray and designated as its type species *Phasma violescens* Leach, 1814 (*Zool. Miscell.* 1 : 26, pl. 9), one of the species originally included in *Diura* Gray. This species has been cited under the erroneous subsequent spelling of *violascens* by Gray (1833, *Ent. Aust.* 1 : 21, 27, pl. 6, fig. 1) and most later authors (but not Kirby, 1904) in combination with *Diura* Gray (*non* Billberg), *Acrophylla* Gray and *Cyphocrania* Burm. For the present it should be interpreted by reference to Leach's plate, but the designation of a neotype would be desirable when the genus is revised. The original material appears to be lost. *Diura roseipennis* Gray (*ibid.* 1 : 22, pl. 7, fig. 2) has been subjectively identified as the female of *violescens*. Its alleged holotype is in the British Museum, but there is in fact nothing to identify it as Gray material. *Didymuria violescens* is an economic species.

Genera *Ctenomorpha* Gray, *Acrophylla* Gray, *Ctenomorphodes* Karny

4. The generic name *Ctenomorpha* was published by Gray, 1833 (*Ent. Aust.* 1 : 16, 27) with two included species, *marginipennis* Gray and *spiniicollis* Gray. The first selection of a type species was by Kirby (1904, *Syn. Cat. Orthopt.* 1 : 388) who selected *Ctenomorpha marginipennis* Gray, 1833 (*Ent. Aust.* 1 : 16, pl. 1, fig. 2). In addition to this spelling, Gray used the form *marginipenne* in the same publication (: 27). He was himself the first subsequent user of the name (Gray, 1835, *Syn. Phasm.* : 41), when he selected the spelling *marginipennis*. The female of Gray's *Diura chronus*, described in the same publication (: 20, 26, pl. 5, fig. 2) and on the same date as *Ctenomorpha marginipennis*, has been regarded as conspecific with the latter. The synonymy was first proposed by Westwood (1859, *Cat. Phasm.* : 114), who, acting as first reviser, adopted *chronus* (in combination with *Acrophylla* Gray) in preference to *marginipennis* as the name for this species, an action which must be endorsed under the Copenhagen Decisions. In accordance with common practice in this group of phasmatids, the name *chronus*, which Gray wrote with a capital "C", is apparently based on the name of a Greek mythological personage, in this case *Κρόνος*, the father of Zeus. This should be latinised "Cronus", not "Chronus". However, the spelling of *chronus* has never been called in question, and no emendation of it is called for under the Copenhagen Decisions, since (1) there is no clear evidence, in the original publication, that it is in fact based on the name of the god, and (2) errors of transliteration are exempted from emendation. The synonymy of *marginipennis* and *chronus* is likely to be accepted on taxonomic grounds only so long as the former is interpreted on the male and the latter on the female. These are the sexes figured respectively by Gray, but that author also described in each case what he took to be the opposite sex. In the interests of stability, and since all the original material appears to be lost, I hereby select the specimen figured as pl. 1, fig. 2 by Gray (1833, *Ent. Aust.* 1) to be the lectotype of *Ctenomorpha marginipennis* Gray and that figured as pl. 5, fig. 2 in the same publication to be the lectotype of *Diura chronus* Gray.

5. The genus *Acrophylla* was established by Gray (1835, *Syn. Phasm.* : 39)

with several included species, one of which was *Phasma titan* Macleay (W.S.), 1826 (in King, *Surv. Coasts Aust.* 2 : 454)—published in April 1826, not in 1827 as often cited : see Musgrave, 1932, *Bibl. Aust. Ent.* : 214. This species was the first to be selected as the type species of *Acrophylla* Gray, namely by Karny, 1923 (*Treubia* 3 : 240), not by Kirby, 1904, as stated by Karny.

6. Redtenbacher, 1908 (in Brunner & Redtenbacher, *Insektenfam. Phasm.*) ignored Kirby's type selections and, without citing any type species himself, referred *Diura chronus* and, as a synonym, *Ctenomorpha marginipennis* (type species of *Ctenomorpha* Gray) to the genus *Acrophylla*, and *Phasma titan* (type species of *Acrophylla* Gray) to the genus *Vetilia* Stål. In the genus *Ctenomorpha* he placed four species, of which one was an originally included species, one was *Phasma (Diura) briareus* Gray, 1834, and another "*Ctenomorpha tessellata* Gray, 1835" (see below, paragraph 7). The limits of *Acrophylla* (*sensu* Redt. *non* Gray) are essentially those of *Ctenomorpha* Gray and quite different from those of *Acrophylla* Gray. On the other hand, *Ctenomorpha* (*sensu* Redt., *op. cit.* : 458) has been regarded by later authors as representing a distinct taxon ; the name *Ctenomorphodes* Karny, 1923 (*Treubia* 3 : 240) has been proposed as a new name for this unit, with *Phasma (Diura) briareus* Gray, 1834 (*Trans. ent. Soc. Lond.* 1 : 45) as type species by original designation.

7. One of the species referable to *Ctenomorphodes* Karny is the species described by Gray (1835, *Syn. Phasm.* : 44) as *Ctenomorpha tessulata*. Westwood, 1859 (*Cat. Phasm.* : 115) and all subsequent authors have cited this name as "*tessellata*". While it is very probable that in naming his species Gray wished to refer to the tessellated pattern of the wing, there is no evidence in the original publication that this was his intention, and he does not use the word "*tessellated*" in his description of that pattern. Thus "*tessulata*" is a valid original spelling in the sense of the Copenhagen Decisions and must be preserved. Although later authors have uniformly employed the spelling "*tessellata*", the number of papers actually involved does not exceed about half-a-dozen ; there is thus no occasion for the Commission to consider validating this erroneous subsequent spelling under the Plenary Powers. Furthermore, the Rev. Professor L. W. Grensted (Consulting Classical Advisor to the Commission) has reported that the generic name *Ctenomorphodes* is masculine. The species, which is of economic importance, should therefore be cited as *Ctenomorphodes tessulatus*.

#### Family-group Names

8. The genus *Diura* Gray, 1833 (*non* Billberg) has been used by Redtenbacher, 1908 (in Brunner & Redtenbacher, *Insektenfam. Phasm.* : 379) as the basis for the "*sectio*" *DIURAE* of his "*tribus*" *PHIBALOSOMINI*. Since, as already indicated, *Diura* Gray has been replaced by *Didymuria* Kirby, 1904, it is necessary under the Copenhagen Decisions to replace *DIURAE* Redt. by a family-group name based on the latter generic name. However, Günther (1953, *Beitr. Ent.* 3 : 548, 553) has erected a subfamily *PODACANTHINAE* on the genus *Podacanthus* Gray, 1833, and given to it the limits "*die Redtenbacher (1908) seinen 'Diurae' gab*", *Didymuria* being one of the included genera. The name *PODACANTHINAE* has been used in important recent works, whereas

DIURAE never had general currency. Thus a replacement for DIURAE Redt. would be required only by workers who placed *Didymuria* in a different family-group taxon from *Podacanthus*.

9. The genus *Acrophylla* Gray has similarly been used as the basis for the tribe ACROPHYLLINI Redt., 1908 (in Brunner & Redtenbacher, *Insektenfam. Phasm.*: 436). However, Redtenbacher misidentified Gray's genus (see paragraph 6 above). The International Commission is asked to rule to this effect, whereupon, under Declaration 28 (*Ops. Decls. Int. Comm. zool. Nomencl.* 14 : xiii), the name ACROPHYLLINI will be automatically rejected. *Acrophylla* Gray, as well as *Ctenomorpha* Gray (corresponding to Redtenbacher's interpretation of *Acrophylla*) are currently placed in the nominate subfamily and tribe of the family "PHASMIDAE" Gray, 1835 (*Syn. Phasm.*: 1-44) based on the genus *Phasma* Lichtenstein, 1796 (*Cat. Mus. Zool. Hamb.* 3 : 77). The selection by Latreille, 1810 (*Consid. gen. Anim. Crust. Arach. Ins.*: 246, 433) of "*Mantis rossia* Fabr." (1793, *Ent. syst.* 2 : 13) (i.e. *Mantis rossia* Rossi, 1790, *Fauna Etrusca* 1 : 259; *ibid.* 2 : pl. 8, fig. 1)<sup>1</sup> to be the type species of *Phasma* Lichtenstein, 1796 is invalid, not for the reasons given by Kirby (1904, *Ann. Mag. nat. Hist.* (7) 13 : 439), but because this was not an originally included species. It appears that Kirby may have confused this name with *Mantis rosea* Fabricius, 1793 (*Ent. syst.* 2 : 16), which was in Lichtenstein's list. Although, further, Kirby's reasons for regarding *Phasma empusa* Licht., 1796 as the type species are not valid, he has in fact validly selected that species, which must be accepted as the type species of *Phasma*.

10. The family-name PHASMIDAE Gray is defectively formed and under the Copenhagen Decisions should be automatically corrected to the form "PHASMATIDAE" Gray, 1835. This spelling has been used by a number of authors from at least as early as 1881 (Macleay, *Proc. linn. Soc. N.S.W.* 6 : 536) right up to recent years, although "PHASMIDAE" has probably predominated. I do not see sufficient reason for seeking the use of the Plenary Powers to validate "PHASMIDAE".

11. For the reasons detailed above, I ask the International Commission on Zoological Nomenclature:—

(1) to place the following names on the Official List of Generic Names in Zoology:

- (a) *Podacanthus* Gray, 1833 (gender: masculine), type species, by monotypy, *Podacanthus typhon* Gray, 1833, as defined by the lectotype selected in paragraph 2 above;
- (b) *Didymuria* Kirby, 1904 (gender: feminine), type species, by original designation, *Phasma violescens* Leach, 1814;
- (c) *Ctenomorpha* Gray, 1833 (gender: feminine), type species, by selection by Kirby, 1904, *Ctenomorpha marginipennis* Gray, 1833, as defined by the lectotype selected in paragraph 4 above;
- (d) *Acrophylla* Gray, 1833 (gender: feminine), type species by selection by Karny, 1923, *Phasma titan* Macleay, 1826;

<sup>1</sup>Baccetti (*Mem. Soc. ent. Ital.* 36 : 61-64 (1957)) has shown that this name was first published by Rossi two years earlier than has generally been supposed (*Mem. mat. fis. Soc. ital.* 4 : 134 (1788)), in the combination *Pseudomantes rossia*.



- (e) *Ctenomorphodes* Karny, 1923 (gender : masculine), type species, by original designation, *Phasma (Diura) briareus* Gray, 1834 ;
- (f) *Phasma* Lichtenstein, 1796 (gender : neuter), type species, by selection by Kirby, 1904, *Phasma empusa* Lichtenstein, 1796 ;
- (2) to place the following names on the Official Index of Rejected and Invalid Generic Names in Zoology :
  - (a) *Podacanthus* Macleay, 1881 (an erroneous subsequent spelling of *Podacanthus* Gray, 1833) ;
  - (b) *Diura* Gray, 1833 (a junior homonym of *Diura* Billberg, 1820) ;
- (3) to place the following names on the Official List of Specific Names in Zoology :
  - (a) *typhon* Gray, 1833, as published in the binomen *Podacanthus typhon*, and as defined by the lectotype selected in paragraph 2 above (type species of *Podacanthus* Gray, 1833) ;
  - (b) *wilkinsoni* Macleay (W.J.), 1881, as published in the binomen *Podacanthus wilkinsoni*, and as defined by the lectotype selected in paragraph 2 above ;
  - (c) *violascens* Leach, 1814, as published in the binomen *Phasma violascens* (type species of *Didymuria* Kirby, 1904) ;
  - (d) *chronus* Gray, 1833, as published in the binomen *Diura chronus*, and as defined by the lectotype selected in paragraph 4 above ;
  - (e) *titan* Macleay (W.S.), 1826, as published in the binomen *Phasma titan* (type species of *Acrophylla* Gray, 1835) ;
  - (f) *briareus* Gray, 1834, as published in the binomen *Phasma (Diura) briareus* (type species of *Ctenomorphodes* Karny, 1823) ;
  - (g) *tessulata* Gray, 1835, as published in the binomen *Ctenomorpha tessulata* ;
  - (h) *empusa* Lichtenstein, 1796, as published in the binomen *Phasma empusa* (type species of *Phasma* Lichtenstein, 1796) ;
- (4) to place the following names on the Official Index of Rejected and Invalid Specific Names in Zoology :
  - (a) *violascens* Gray, 1833, as published in the binomen *Diura violascens* (and later usages in combination with *Acrophylla* Gray, *Cyphocrania* Burm., *Didymuria* Kirby, etc.) (an erroneous subsequent spelling of *violascens* Leach, 1814, as published in the binomen *Phasma violascens*) ;
  - (b) *tessellata* Westwood, 1859, as published in the binomen *Acrophylla tessellata* (and later uses in combination with *Acrophylla* Gray and *Ctenomorpha* Gray) (an erroneous subsequent spelling of *tessulata* Gray, 1835, as published in the binomen *Ctenomorpha tessulata*) ;
- (5) to rule that Redtenbacher, 1908, misdetermined the genus *Acrophylla* Gray, in proposing the family-group name ACROPHYLLINI ;
- (6) to place the following names on the Official List of Family-group Names in Zoology :
  - (a) PODACANTHINAE Günther, 1953 (type genus *Podacanthus* Gray, 1833) ;

- (b) PHASMATIDAE (correction of PHASMIDAE) Gray, 1835 (type genus *Phasma* Lichtenstein, 1796);
- (7) to place the following names on the Official Index of Rejected and Invalid Family-group Names in Zoology:
  - (a) DIURAE Redtenbacher, 1908 (type genus *Diura* Gray, 1833), invalid because the name of the type genus is a junior homonym of *Diura* Billberg, 1820;
  - (b) ACROPHYLLINI Redtenbacher, 1908 (type genus *Acrophylla* Gray, 1833), invalid under Declaration 28 by the ruling requested under (5) above;
  - (c) PHASMIDAE Gray, 1833 (an invalid original spelling of PHASMATIDAE).

COMMENTS ON THE PROPOSED SUPPRESSION UNDER THE PLENARY POWERS OF THE SPECIFIC NAME *SACCHARIVORA* PETERKIN, 1790 (PHALAENA). Z.N.(S.) 1315

(See this volume, pages 56-60.)

By M. H. Breese (*Imperial College of Tropical Agriculture, Trinidad, W.I.*)

I have received a Separate of the paper published by Mr. Harold E. Box in Nos. 1 and 2 of Volume 17 of the *Bulletin of Zoological Nomenclature*. I have further had the opportunity of discussing the subject matter with the author and I strongly support his application to conserve the well-established name of *Diatraea saccharalis* (F.), and the requests made in paragraph 19 of his paper.

By R. H. Zwaluwenberg (*Santa Rosa, California, U.S.A.*)

Mr. Harold E. Box's plea to add to the Official List of Specific Names in Zoology, that of *saccharalis* Fabricius, 1794 (genus *Diatraea*) for the moth borer of sugar-cane, merits favourable consideration. This name has been in general use for over fifty years, for an insect of great economic importance, and is the subject of a voluminous bibliography.

To approve the name *sacchorivora* Peterkin, 1790, a nomen so obscure as to be all but unknown, would create unfortunate confusion concerning the prime insect enemy of sugar-cane in the Americas.

By F. Fernández, P. Guagliumi, W. Szumlowski, N. J. Angeles, C. J. Rosales,  
R. Lichy (*Maracay, Venezuela*)

We have received from our friend Harold E. Box a reprint of the application published in *Bull. zool. Nomencl.* 17 : 56-60; and we wish to record that we were not in favour of altering the well-known name, *Diatraea saccharalis* (Fabricius) for the sugar-cane borer.